NOTE XVI.

DESCRIPTIONS OF NEW MELANIDAE

BY

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(Plate 2).

Amongst the Melanidae of the Leyden Museum, many species were unknown to me, so I submitted them all to the judgment of the late Dr. A. Brot, who declared many of them to be doubtful, which I have indicated in the Catalogue of the Museum by a note of interrogation; a few others, however, seemed also to this much regretted authority to be new to science and so I ventured to describe them as follows.

1. *Melania Junghuhni*, n. sp.

(Plate 2, fig. 1).

Shell elongately-ovate, thin, yellowish-olive, banded or flamed with brown, apex eroded, remaining whorls 6 to 8, flatly convex, closely ridged, with about 16 ridges on the penultimate whorl; base of last whorl with some stronger ridges; moreover the shell is covered with lines of growth. Sutures distinct, but not deep. Aperture ovately oblong, upper angle acute, base produced. Columella white, curved; outer margin thin, slightly crenulate; interior of aperture bluish white, with one or two brown bands, or more or less flamed with brown. Operculum small, with very few volutions and a central nucleus.

Alt. 28, lat. 12½. Apert. alt. 13, lat. 7 mill. (*fasciata*).
» 38, » 16½. » » 15, » 8 » (*flammulata*).

Hab. Java, legit Junghuhn.

This species may be divided into two varieties:

a. var. *fasciata*: smaller, sometimes more ventricose, with a band at the periphery and another near the base; rarely with traces of flames or of an infrasutural band.

b. var. *flammulata*: larger, with irregular flames, generally more subulate.

This new form is allied to *M. sulcospira* Mouss. and *testudinaria* v. d. Busch; it may be distinguished from the first by its much more elongated spire, with flatter whorls, the yellowish colour etc.; from the latter by its more acute spire, its larger last whorl, and by the convexity of the whorls. It is in these respects intermediate between the two quoted species.

2. *Melania glandiformis*, n. sp.

(Plate 2, fig. 2).

Shell ovate, thick, yellowish olive-brown, much eroded, remaining whorls only 1½; whorls rather smooth, with lines of growth, some of which resemble ribs, and a few more or less conspicuous ridges near the base of the last whorl; penultimate whorl convex; last whorl flat above, nearly angular at the periphery, contracted near the base. Suture well marked but not deep, rather irregular. Aperture ovately oblong, upper angle acute, base much produced, nearly channelled; columella broad, covered with a white callus, slightly curved; interior of aperture bluish white, more or less marked with brown.

Alt. 15, lat. 10½. Apert. alt. 11, lat. 7 mill.

Hab. Java, legit Junghuhn.

This species in closely allied to *M. pisum* Brot, which is, however, much more globose, and the aperture of the new species is not so strongly channelled near the base.

3. *Melania Schwaneri*, n. sp.

(Plate 2, fig. 3).

Shell ovate, thick, dark yellowish-brown, somewhat greenish at the upper whorls. Adult specimens eroded, with 3 whorls; sculpture consisting of rough lines of growth, forming irregular plications, and a few more or less conspicuous spiral striae, giving to the shell a wrinkled appearance; base of shell with a few ridges; whorls flattened-convex, with an obtuse angle at the periphery, only distinctly visible on the last whorl; suture well marked, marginated. Aperture ovate, acute and nearly channelled above, produced at the base; columella curved and slightly twisted; interior of aperture bluish white, brownish at some distance from the margin, especially in young specimens. Operculum with about 3 volutions and a subcentral nucleus, inclining to the left margin.

Alt. 40, lat. 21. Apert. alt. 20, lat. 11 mill.

Hab. Borneo, legit Schwaner.

This species seems to be allied to *M. torquata*, but the whorls are less convex, the last whorl is much more elongated, the lines of growth are nearly straight, the new species is more sculptured. — I have named it after its discoverer.

4. *Melania borneensis*, n. sp.

(Plate 2, fig. 4).

Shell turreted, rather thick, yellowish-olive, decollated, remaining whorls 5, convex, slightly contracted near the sutures. Upper whorls covered with numerous narrow ridges, having the appearance of spiral striae; on the last whorl these ridges are only conspicuous near the suture and especially near the base, where they are much stronger, lines of growth conspicuous but not prominent. Aperture ovate, not very acute above, produced and nearly channelled below, columellar margin thin, moderately curved much twisted; interior of aperture bluish white.

Alt. 55, lat. 22. Apert. alt. 19½, lat. 11 mill.

Hab. Borneo, legit Schwaner.

Of this species the Leyden Museum possesses only one specimen, it differs much from any other Bornean species. Moreover Dr. Brot knew no species, to which it could belong as a variety.

5. *Melania Mülleri*, n. sp.

(Plate 2, fig. 5).

Shell subulate, rather solid, olive-brown, often with purple spots near the sutures and eventually with very obscure punctuations. Apex nearly entire, whorls 7—8, nearly flat, slightly contracted below the sutures, which are not deep and slightly marginated. Shell smooth, with faint lines of growth; base rarely with very faint striae. Aperture ovate, acute above, broadly rounded below, columella curved and twisted; interior of aperture bluish white.

Alt. 40, lat. 13. Apert. alt. 14, lat. 7 mill.

Hab. Borneo, Java, Moluccas; without locality, legit Müller.

It is not without hesitation that I describe this and the next species as new, as it seems rather strange, that species with so wide a distribution should not have been described before. The new species has much resemblance with young specimens of *M. uniformis* Q. & G., but the upper whorls are smooth, it differs in colour and especially in the characters of the aperture. It seems to be allied to *M. pantherina* v. d. Busch and *monile* Mouss., but is sufficiently distinct by the colour, sculpture and aperture.

6. *Melania subpunctata*, n. sp.

(Plate 2, fig. 6).

Shell subulate, rather solid, olive-brown, encircled with interrupted brown lines, which are covered by the epidermis and therefore not conspicuous. Apex slightly eroded, whorls 8, slightly convex, with shallow sutures. Shell smooth, shining, with lines of growth and eventually small wrinkles, last whorl more convex, base with some conspicuous ridges. Aperture ovate, acute above, narrowly rounded below. Columella slightly curved; interior of aperture bluish white.

Alt. 33, lat. 12. Apert. alt. 13, lat. 6 mill.

Hab. Borneo, legit Müller; Java, and 5 specimens without locality.

This species is closely allied to the former, but may be distinguished by the more convex whorls, which are not contracted nor marginated near the sutures, by the interrupted lines which are, however, not always present, and by the straighter columella, which is not twisted.

7. *Melania pagoda* Lea.

var.: *costulata* n. var.

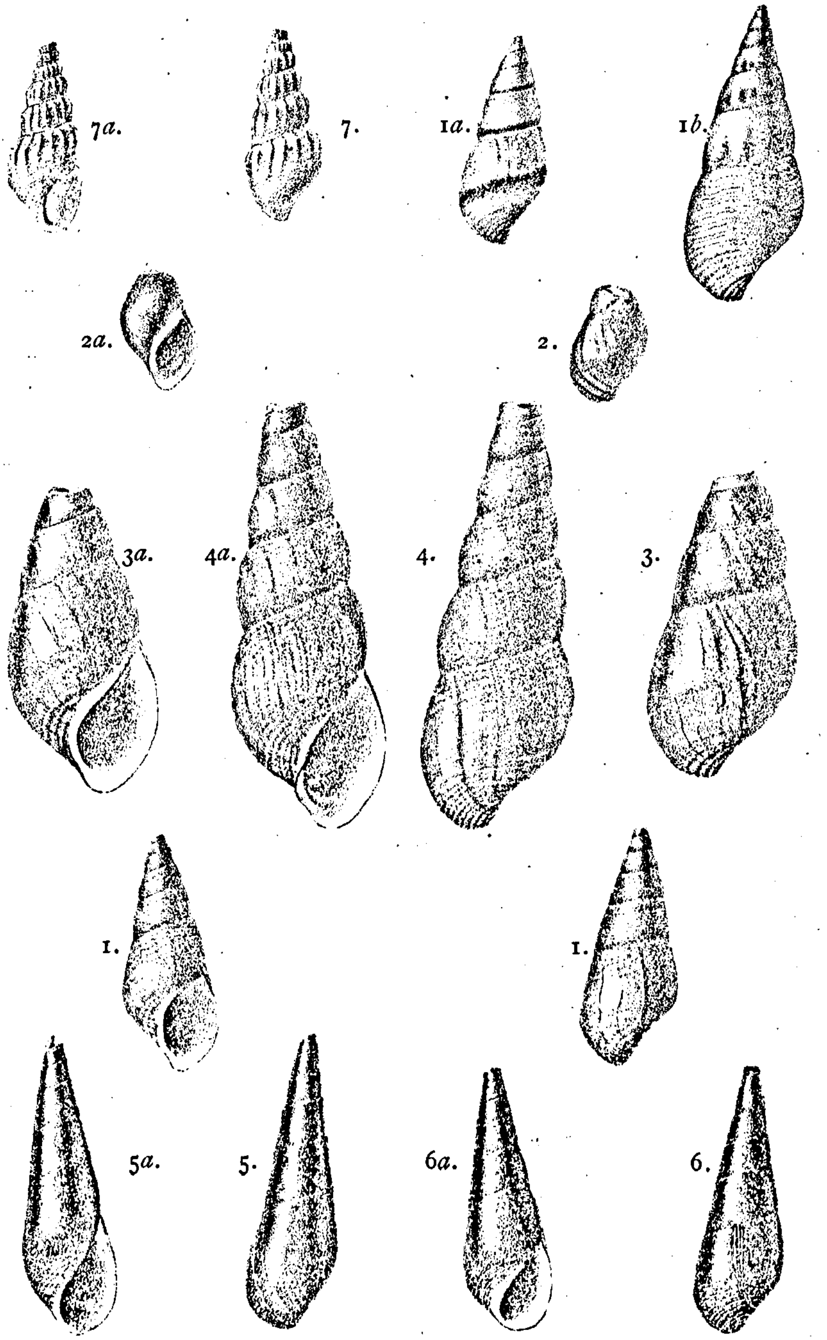
(Plate 2, fig. 7).

This variety differs from the type by the spines being almost obliterated, especially in some specimens, and if present on the upper whorls, they are still less conspicuous and have the appearance of ribs.

Hab. Adonara and Flores, legit Semmelink; Koepang (Timor), legit Zynen Wartel.

Though this variety is rather different from typical specimens, Dr. Brot suggested that it should belong to *M. pagoda* Lea, and among the specimens of the Leyden Museum, really many intermediate forms are found, varying from specimens which are only ribbed to such which become spinous.

Rhoon near Rotterdam, 18 September 1896.



R. Raar ad nat. del. et lith. P. W. M. Trap impr.

1. Melania Junghuhni *Schepm.*
1*a*. id. var. fasciata *Schepm.*
1*b*. id. var. flammulata *Schepm.*
2. Melania glandiformis *Schepm.*
3. Melania Schwaneri *Schepm.*
4. „ borneensis *Schepm.*
5. „ Mülleri *Schepm.*
6. „ subpunctata *Schepm.*
7. Melania pagoda *Lea*, var. costulata *Schepm.*